

NEALS HILL MATERIALS
SOURCE
EAST STEENS ROAD
PROJECT

ENVIRONMENTAL ASSESSMENT
OR-03-027-064

Bureau of Land Management
Burns District Office
Andrews Resource Area
28910 Hwy 20 West
Hines, Oregon 97738

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CHAPTER I: INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

A. Introduction

In 1995 and 1996 Andrews Resource Area was examined by the Burns District Geologist to identify potential new mineral materials sources for inclusion in the Andrews Resource Area portion of the Southeast Oregon Resource Management Plan. On May 10, 1996, a 120-acre materials source area was designated as a community pit named Neals Hill in a memorandum signed by the Burns District Manager. On May 16, 1996, this site was assigned serial number OR52801 and entered into the Bureau of Land Management (BLM) mineral materials database.

Neals Hill Materials Source is located within the Steens Mountain Cooperative Management and Protection Area (CMPA). It is one of the sites specifically identified in the Steens Mountain Cooperative Management and Protection Act (Steens Act) of 2000 (P.L. 106-399, signed October 30, 2000) for development of saleable mineral resources for road maintenance use only.

Seventy-two percent of the Andrews Resource Area and that portion of the Three Rivers Resource Area within the CMPA are not available for development of salable minerals sources due to the Steens Act and the presence of Wilderness Study Areas (WSA).

The elevation at Neals Hill Materials Source ranges from 4,280 feet to 4,480 feet. The topography is mainly gently sloping with approximately half the area at the top of a gently sloping hill that is located less than 1-mile north of the East Steens Road. The area receives approximately 8 to 12 inches of precipitation per year.

The pit is located approximately 6 miles southwest of State Highway 78 on East Steens Road. Access to the materials source is via an established County road off the East Steens Road.

East Steens Road is a maintained, graveled, Harney County road (#201). This road begins 70 miles southeast of Burns, Oregon, off State Highway 78 and ends near Fields, Oregon, approximately 63 miles to the southwest.

In June 2003, the Harney County Road Department drilled 15 exploratory holes at Neals Hill Materials Source (the project being categorically excluded from NEPA analysis and approved June 6, 2003). In September 2003 (updated July 2004), the Harney County Road Department provided a mining plan to BLM for this materials source (Appendix A).

B. Purpose and Need

The purpose of the proposed action is to provide a needed mineral materials source to Harney County to resurface, pave, and maintain the East Steens Road. The mineral materials source is described as the Neals Hill Materials Source located at T. 29 S., R. 36 E., Section 26, SW¹/₄NW¹/₄, NW¹/₄SW¹/₄, and N¹/₂SW¹/₄SW¹/₄ (Appendix B), which is in close proximity to the East Steens Road project. Harney County is proposing to widen, place base rock, and eventually pave approximately 63 miles of the East Steens Road. The materials extracted from the Neals Hill Materials Source would be used for approximately the first 25 miles of the East Steens Road beginning at Highway 78 (northern half).

In 1995 Harney County graveled East Steens Road from Highway 78 southwesterly to Fifteen Cent Lake. This portion of the road is completely worn out due to use, grading, and periodic plowing of snow. This portion of the road is in need of resurfacing due to lack of material on the road creating a potential safety hazard.

After completion of the northern portion of the East Steens Road Project, the materials source would be used as a long-term (50 years) aggregate source. Primary use would be by the Harney County Road Department under a Free Use Permit issued by BLM.

C. Relationship to Planning/Conformance with Land Use Plans

The proposed action is consistent with:

- Steens Act;
- The 1982 Andrews Management Framework Plan minerals objective of keeping public land open for use of mineral resources;
- Andrews Management Unit/Steens Mountain CMPA Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS), Energy and Minerals resource section, “Goal 3 – Provide opportunities for the production of saleable minerals by local, state, and federal agencies and the public in a culturally- and environmentally-sound manner”; and
- State, local, and Tribal land use plans and regulations.

CHAPTER II: ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Proposed Action

The proposed action includes (under authority of a BLM Free Use Permit) removal of approximately 100,000 cubic yards of aggregate (Steens Basalt) from Neals Hill Materials Source for the East Steens Road Project within the first year (2004). It is anticipated an additional 150,000 cubic yards would be removed over the following 4 years (2005-2008) for completion and maintenance of the northern half of the project.

Initial surface disturbance would consist of approximately 20 acres with an additional 20 acres disturbed over the next 4 to 5 years. The entire operation would be contained within an area approximately 2,000 feet long (north to south) and 1,000 feet wide (east to west).

There would be two phases to the mining operation:

- 1) Phase 1 of the operation would include drilling, blasting, crushing, and stockpiling of rock. Blasting would occur only one time for the East Steens Road Project. Other future County projects may require additional blasting. Equipment used during this operation would include rock drills, rock crushers, loaders, crawlers, fuel trucks, service trucks, and pickups. This phase is expected to last 2 months. During Phase 1, 6 contracted people, possibly 12 people if double shifting (20 hours/day) occurs during the operation, would likely stay and live on site. Personnel remaining on site would live in fully, self-contained camp trailers located north of the excavation area. Gray water and sewage (human waste) would be hauled to an approved sanitary waste disposal facility. Portable toilets would be on-site anytime there is activity.
- 2) Phase 2 of the operation would include loading and hauling of the crushed rock to the northern portion of East Steens Road. Equipment used would include loaders, trucks, fuel trucks, service trucks, water trucks, and motor graders. County personnel would live off site (locally) and would travel to the work site each day. Hours of operation would be Monday through Thursday, 6 a.m. to 5 p.m. Portable toilets would be on-site anytime there is activity. Harney County is proposing to resurface and pave at least 10 miles of East Steens Road per year (funding dependent). A cold mix plant (pug mill) consisting of an asphalt/rock mixer and two asphalt tanks would also be on site during paving operations. This phase could last 4 to 5 years and could be year-round.

Less than 1-foot of topsoil (overburden) at the excavation site (Appendix C) would be removed and stockpiled on the north and east sides of the first excavation area for use in reclaiming the area. The overburden stockpiles would be smoothed and contoured with side slopes no steeper than 2:1 and seeded with a mixture of native and nonnative perennial grasses, shrubs, and forbs as identified by BLM. A 10-foot buffer between the toe of the overburden stockpile and the excavation area would be maintained. As excavation continues to the south of the original excavation site, overburden would only be stockpiled on the east side for use in reclamation. All final slopes would be left on a 3:1 slope with the working or future slopes to be left on an approximate ¼:1 slope. Overburden stockpiles would be used for ongoing reclamation upon closure of a given area of the proposed site. Reclaimed areas would be seeded with a native/nonnative, weed-free seed mixture dependent upon availability. Reclamation would occur once the material has been exhausted or a need no longer exists, whichever occurs first. Final reclamation would include recontouring the disturbed area to resemble the surrounding landscape contours.

Rock piles would be placed on the south side of the first excavation area with future piles to be placed in the previously excavated areas. Oversized material would be left in a stockpile in the floor of the excavation area.

The existing access route to the community site would be bladed and shaped with turnouts constructed approximately every 500 to 600 feet to allow two vehicles to pass safely. The turnouts would be approximately 200 feet long and 6 feet wide. No surface disturbance would occur on the west side of the access road. The route would be 14 feet wide and surfaced with approximately 3 to 4 inches of crushed rock manufactured during Phase 1 of the operation. A temporary cattle guard would be placed on the access road just off the East Steens Road, and would be removed once the project has been completed. The route would be watered, graded, and maintained throughout the entire operation as needed. Water would be acquired from private sources (Juniper or Mann Lake Ranches). The access route would also be sprayed with Rodeo (herbicide) each spring.

People working on site would park their vehicles to the north of the excavation area.

Any weed infestations would be treated by the County in accordance with the Burns District Weed Management Plan. Equipment would be washed prior to it being brought to the site to prevent the spread of noxious weeds. Equipment leaving the roadway outside the project area would be rewashed prior to reentry.

In the event cultural or paleontological resources are encountered during any activity of the proposed action, all work would cease and appropriate BLM personnel would be notified.

The County would take responsibility for possible public use and safety of the site with signing and ramping rejected material against steep slopes or placing boulders on the top edge of the vertical walls of the pit as determined necessary. The County would be responsible for removal and disposal of all garbage and industrial waste. Any spilled hazardous materials would be promptly cleaned up and disposed of properly. The County would keep stored fuel above ground in accordance with State laws.

B. Alternative 1 - No Action

The no action alternative is equivalent to existing management of the Neals Hill Materials Source. Since the designation of the materials source in 1996, no mining activity has occurred. Therefore, no mining would actually occur with selection and implementation of the no action alternative. However, Harney County could purchase materials from a private source at public expense to resurface and pave East Steens Road.

C. Other Alternatives Considered but Eliminated from Detailed Study

Neals Hill Materials Source is one of the closest mineral materials sites to the East Steens Road Project. The materials source consists of Steens Basalt which is generally suitable for use in road construction and maintenance. Other sites considered are located adjacent to State Highway 78 and are in Oregon Department of Transportation highway rights-of-ways associated with construction and maintenance of State highways, or are on private land and hauling distance is not economical. A sand and gravel source located on the East Steens Road south of Neals Hill Materials Source is nearly depleted.

CHAPTER III: AFFECTED ENVIRONMENT

A. Critical Elements

The following chart of critical elements of the human environment indicates whether or not they are known to be affected by the proposal. Critical elements not affected by the proposal are not discussed further in this document.

Critical Element	Affected	Not Affected
Areas of Critical Environmental Concern		X
Air Quality	X	
Cultural Resources	X	
Environmental Justice		X
Prime or Unique Farmlands		X
Floodplains		X
Noxious Weeds	X	
Special Status Species (Plant)		X
Special Status Species (Animal)	X	
Migratory Birds	X	
Hazardous Materials		X
American Indian Religious Concerns		X
Paleontology		X
Water Quality		X
Wetlands and Riparian Zones		X
Wild and Scenic Rivers		X
Wilderness and WSAs		X
Adverse Energy Impact		X

1. Air Quality

The excavation site is located approximately 1-mile from the East Steens Road which produces dust during dry periods temporarily affecting air quality. Wildland fires or prescribed wildland fires in the area also affect air quality. During high winds dust comes from the Alvord Desert playa.

2. Cultural Resources

Two recorded prehistoric sites abut the access road in Sections 27 and 35. The sites have not been evaluated for National Register eligibility. Unevaluated archaeological sites are treated as National Register eligible and protected from direct and indirect effects until evaluated.

3. Noxious Weeds

Medusahead rye, which is an annual weed, occurs adjacent to the access road to the materials source. Current vehicle use of the access road is light and occurs mostly in association with hunting activities. Medusahead rye is currently not found in the proposed excavation and stockpile areas.

4. Special Status Species

Bighorn sheep and Greater sage-grouse are known to inhabit the area but are not known to use the immediate area of the materials source. White-tailed antelope ground squirrels and burrowing owls are also found in the area. This area is winter range for bighorn sheep, but there are no known lambing grounds nearby. There are four sage-grouse leks approximately 2 miles to the north and northeast of the materials source.

5. Migratory Birds

Several species of migratory birds occur in the area including horned larks, savannah sparrows, and other grassland species.

6. Hazardous Materials

No concerns exist regarding hazardous materials.

B. Noncritical Elements

1. Soils

Soil type within the proposed disturbance site is within the Roca series, a very cobbled clay loam with slopes of 15 to 40 percent. Harney County Road Department's exploratory drill test holes show soil depth is 1-foot or less in the proposed excavation area and approximately 2 feet deep in the proposed aggregate stockpile area.

2. Vegetation/Range

The vegetation in the surrounding area is dominated by Wyoming big sagebrush with an understory of Sandberg's bluegrass. In 2001 a wildland fire swept the area of the materials source burning most of the sagebrush. The area revegetated with cheatgrass, a nondesirable exotic grass species. No biological soil crusts are present.

3. Water Resources

There are no water sources within the proposed excavation or stockpile areas. Water used to wet down the access road, excavation site, and East Steens Road would be obtained from private sources. There would be no effects to water resources; therefore, water resources will not be discussed further.

4. Wildlife

Wildlife that use the area include mule deer, pronghorn antelope, coyote, mountain lion, chukar, ravens, golden eagle, northern harrier, black-tailed jackrabbit, western meadowlark, and other songbirds, reptiles, and small mammals. A new species of butterfly (*Colias occidentalis sullivanii*) was recently observed in the area of the materials source. The butterfly is dependent on a specific plant (stiff vetchling) in an area approximately one-half mile northeast of the materials source.

5. Grazing Management

East Steens Cattle Company, LLC, is the current permittee in the Pollock Allotment. There are 4,107 AUMs permitted in this allotment with a season of use from mid-April through the end of December.

Range improvements consist of a fence paralleling the East Steens Road.

6. Recreation

The proposed project area is used primarily for dispersed recreation (upland bird and big game hunting). The site is within 1-mile of the East Steens Road, a major travel route to Mann Lake, the Alvord Desert playa, and other sites along the east side of Steens Mountain.

The use of motorized or mechanized vehicles on public land within the CMLPA is prohibited off-road and is limited to those roads and trails designated for their use. The PRMP Off-Highway Vehicle (OHV) designation for the project area is "limited to designated roads."

7. Visual Resources

The site is located in a Visual Resource Management (VRM) Class II area. The VRM Class II objective is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The project area is along the top of a gently rolling hill. Vegetation colors are uniform and range from light green to tan, depending on the season. The existing access route is a two-track road, consisting of two parallel, sinuous lines. There are no human-made structures at the site.

8. Wild Horses

The Neals Hill Materials Source is located within the Heath Creek/Sheepshead Herd Management Area (HMA) consisting of 62,427 acres and adjacent to the Riddle Mountain HMA. The appropriate management level for the Heath Creek/Sheepshead herd is 61 to 102 wild horses. Although the proposed action is within an HMA, the horses do not use the area in proximity to the proposed action; therefore, there would be no effects to wild horses and they will not be addressed further.

9. Noise

The ambient noise level in the area is low. The site is approximately 1-mile from the East Steens Road which has a low to moderate ambient noise level caused by occasional traffic.

10. Social/Economic

The Burns/Hines community, the primary economic center for Harney County, is located northwest of the materials source approximately 76 miles. Limited services can be found in Fields approximately 60 miles south of the materials source and Crane located approximately 42 miles northwest.

There is no economic revenue generated from energy or mineral facilities within the Andrews Resource Area. Hunting and other types of recreation provide income to the County and local communities, while tourism in the area is small compared to other Oregon regions. Although tourism may be light in Harney County, it is one of the primary uses of the general area. The primary economic activities in Harney County are cattle ranching and forage production.

The East Steens area is remote and relatively uninhabited.

11. Lands and Realty

The Neals Hill Materials Source is located on BLM-administered land within the Steens Mountain CMPA. The access road is identified in the Harney County Road Reference (1979) as an established County road. The disturbed area of the access road is approximately 28 feet wide, is .9-mile to the proposed excavation area and covers approximately 3 acres.

12. Geology

Neals Hill Materials Source is located in Steens Basalt, a chemically homogenous sequence of basalt flows that are typically 20 to 30 feet thick. The basalt extends at least 50 feet below the surface at the proposed excavation site. Steens Basalt is generally suitable for use as road aggregate. Harney County drill logs indicate the rock at the northern end of the designated community pit area is soft and not suitable for road aggregate.

The area is withdrawn from locatable and leasable minerals activity by the Steens Act. There are no grandfathered mining claims or mineral leases in the area.

CHAPTER IV: ENVIRONMENTAL CONSEQUENCES

A. Proposed Action - Critical Elements

1. Air Quality

There could be temporary effects to air quality during hours of operation due to dust caused by excavation and hauling of material. To help minimize effects, the access road, East Steens Road, and the rock crushing site would be watered during operations. Air quality may also be affected by wind events blowing dust from the overburden stockpiles prior to revegetation.

Air quality would improve when the East Steens Road is resurfaced and paved, thereby, decreasing dust created by vehicles or wind events.

2. Cultural Resources

Two recorded prehistoric sites occur adjacent to the existing access road. The current access road disturbance is 28 feet wide. Gravel would be placed on 14 feet of this disturbance leaving 14 feet for the 200-foot by 6-foot wide turnouts.

Potential still exists, however, for the sites to be damaged or destroyed by road maintenance/construction. Burns BLM cultural resources staff would meet with Harney County representatives and identify the site locations prior to improvement of the existing access road and construction of the turnouts. Site areas would be flagged as avoidance areas. The sites would be avoided when constructing the turnouts to the existing access road and monitored for effects during construction and road use.

3. Noxious Weeds

Medusahead rye is known to exist in the area of the access road. On public land BLM is not approved to use herbicides found to be highly effective on medusahead. However, BLM can use glyphosate products (Rodeo) which would significantly reduce the amount of seed production on the roadbed. After the access road is graveled, it would be treated with the herbicide Rodeo each spring prior to seed production.

Any weed infestations would be treated in accordance with the Burns District Weed Management Plan.

4. Special Status Species

There would be no effects to bighorn sheep during winter season or lambing periods. Greater sage-grouse would not be affected due to the distance from lek sites. Greater sage-grouse would avoid the area during operation of equipment at the materials source. Burrowing owls are known in the area of the pit but are not close enough to be disturbed by the activity. White-tailed antelope ground squirrels are probably in the area and would be displaced by the activity at the pit, but would return after the disturbance ceases.

5. Migratory Birds

The area of the proposed disturbance would be devoid of vegetation after a short period of time and any migratory birds that are nesting in the area of the pit would be displaced due to the loss of habitat. There would be little to no use of the area after the vegetation is removed. The area of proposed disturbance is fairly small and the effects to migratory birds would be minimal.

The proposed action is to run the crushing equipment, blasting and hauling for 20 hours per day, 5 days per week, for the months of August and September. This would be after the nesting season for most migratory birds. Noise levels could displace birds up to one-quarter mile from the source. Most birds would have migrated out of the area by September so operations would not have any impact after that time.

The continued operation of hauling and crushing during daylight hours for the

duration of the paving of the north section of the East Steens Road would affect migratory birds to much less an extent since most of these birds would be migrating south by September with very few around during the winter months.

B. Proposed Action - Noncritical Elements

1. Soils

Wind and precipitation erosion could occur on stockpiles until planted native and nonnative vegetation has established. Reclaimed areas would also have erosion potential until the planted native and nonnative seed mixture establishes.

2. Vegetation

Initially all vegetation would be removed from the excavation site. During reclamation the site would be reseeded with a native/nonnative perennial seed mixture.

3. Wildlife

Most wildlife species known to the area would be displaced by the disturbance during the operation of equipment. Many would use the area again after the disturbance ceases.

The resurfacing and paving of East Steens Road could increase vehicle traffic as well as vehicle speed. This could increase wildlife injury and mortality.

4. Grazing Management

The disturbance site is small enough that there would be a minimal affect to grazing management. When livestock are in the area, trucks are encouraged to travel at a speed of no greater than 25 miles per hour. The Harney County Road Department would replace the existing gate with a temporary, removable, cattleguard to ensure livestock containment within the Pollock Allotment. The gate is located just off the East Steens Road.

5. Recreation

Mineral materials development at the site could displace some hunters. The site could also attract campers, target shooters, and OHV users when it is inactive and could result in increased litter, camping stay violations, OHV designation violations, and safety issues.

Although the current East Steens Road is a maintained County road, resurfacing and paving the road could attract additional visitors and additional types of uses to the area and to public land accessible from the East Steens Road. An increase

in visitors could place more demands on existing recreation facilities and increase demands for improved and new recreation facilities and access. Inadvertent and intentional trespass use of private lands could increase.

6. Visual Resources

The proposed action would introduce a variety of new lines, forms, and colors into the existing landscape. When the equipment is on-site, complex, angular forms of an unknown color would be present. Piling of material would add pyramidal to trapezoidal forms to the rolling landscape. However, the stockpiled overburden to the north of the excavation site would be out of view from the casual observer due to terrain features. The initial rock piles would be placed on the south side of the excavation area on the first entry with future piles to be placed in the previously excavated area. After initial entry the rock piles would not be visible to the casual observer. It is expected that the gray color of the gravel and rock would contrast slightly to moderately with the surrounding green to tan vegetation colors. The improved access road would create a long, sinuous, and gray-colored form that would contrast with the existing forms and vegetation colors. Any dust created by the crushing and hauling activities would attract attention to the site and access road.

7. Noise

Noise from blasting, crushing and hauling operations would be moderate (68 to 100 decibel at 50 feet) and typical of that associated with movement of heavy equipment and excavation. Crushing and hauling operations would be weather dependent and could occur year-round.

The resurfacing and paving of East Steens Road could increase vehicle traffic, thereby increasing overall vehicle noise.

8. Social/Economics

The proposed action could have the potential of creating initially 6 to 12 new jobs in Harney County for 2 months during Phase 1 of the operation.

The improved road could increase tourism and therefore positively affect the economic value of the communities of Crane, Fields, Burns, and Hines. The social aspect of the area could also be affected by increasing the number of people recreating or visiting the area.

The County would be working under a Free Use Permit so no revenue would be generated.

9. Lands and Realty

Better access to the area could result in increased property values in the region.

10. Geology

There would be a loss of approximately 250,000 cubic yards of rock from the site.

C. No Action Alternative - Critical Elements

1. Air Quality

Air quality would still be affected by dust from the East Steens Road and smoke from wildfires or prescribed wildland fires.

2. Cultural Resources

Two recorded prehistoric sites occur adjacent to the existing access road. There would be no effect to these sites.

3. Noxious Weeds

Medusahead rye is known to exist in the area of the access road. Oregon BLM currently cannot use any of the herbicides found to be effective for managing medusahead. Any use of the access road from recreationists/visitors has the potential of dispersing medusahead seeds and infesting new areas. Any weed infestations would be treated in accordance with the Burns District Weed Management Plan.

4. Special Status Species

There would be no effects to Special Status animal species.

5. Migratory Birds

There would be no effects to migratory birds.

D. No Action Alternative - Noncritical Elements

The following noncritical elements would not be affected: soils, vegetation, water resources, wildlife, grazing management, visual resources, wild horses, noise, lands/realty, and geology.

1. Recreation

Hunters in the area would not be displaced. Recreation users would not be

attracted to the site, so there would be no additional concerns or issues. Recreation use of the East Steens Road and surrounding area would remain the same or grow slowly, so the demand for improved and new recreation facilities and access would not greatly increase.

2. Social/Economic

No new jobs would be created. Tourism could remain at the current level or would grow slowly.

E. Cumulative Effects

Salable mineral development has the potential to affect almost all other resources. It may be necessary at times to accept resource effects such as visual contrasts because of the need to obtain rock from a salable mineral materials source. Compliance with relevant laws, regulations, and policy, as well as local County rules and regulations would minimize cumulative effects on those resources.

There would be no known cumulative effects to cultural resources, noxious weeds, Special Status species, soil, vegetation/range, water, livestock grazing, visual resources, wild horses, lands and realty, and geology as a result of implementing the proposed action or the no action alternative.

Proposed Action

1. Air Quality

The implementation of the proposed action could temporarily affect air quality in the immediate vicinity of the work site. However, given the size of the general area and wind patterns, the dust would be quickly dispersed. Dust generated by the proposed action would be minor compared to dust often generated by winds on the Alvord Desert playa. Air quality could improve when the East Steens Road is resurfaced and paved decreasing dust created by vehicles or wind events.

2. Migratory Birds

The expansion of the pit in the long term from 20 acres to 40 acres would increase the amount of disturbance and amount of unsuitable habitat for migratory birds. This acreage would not affect migratory bird nesting or reproduction in the whole area around the proposed pit.

3. Wildlife

The resurfacing of East Steens Road could increase vehicle traffic and well as vehicle speed. This increased use and speed could have an effect on wildlife due to an increased chance of striking wildlife with a motor vehicle. However, given

the relative straightness and flatness of the East Steens Road, most wildlife would have the opportunity to avoid vehicles.

4. Recreation

Although the current East Steens Road is a maintained County road, resurfacing and paving the road could attract additional visitors and additional types of uses to the area and to public land accessible from the East Steens Road. An increase in visitors could place more demands on the existing recreation facilities and increase demands for improved and new recreation facilities and access. Inadvertent and intentional trespass use of private land could increase.

5. Noise

The resurfacing and paving of East Steens Road could increase vehicle traffic, therefore, increasing the vehicle noise. Given the rural setting of the area, there would be a negligible increase in overall noise from the minerals source site or mineral materials related traffic.

6. Social/Economics

The resurfaced and paved road could increase tourism and, therefore, positively affect the economic value of the communities of Crane, Fields, Burns, and Hines. The social aspect of the area could also be affected by increasing the number of people recreating or visiting the area.

The Neals Hill Materials Source would be a long-term (50 years) aggregate source with approximately 1,000,000 cubic yards of available material. There would always be demand for salable minerals for use in road maintenance; therefore, additional mineral materials sales within this pit are a reasonably foreseeable future action.

After completing the resurfacing and paving of approximately 25 miles of East Steens Road with materials obtained from Neals Hill Materials Source, the County would likely contract with a private landowner to extract materials from private land to complete the southern half of the East Steens Road Project. Once this occurs, the Neals Hill Materials Source would only be used on an intermittent basis to extract materials for maintenance of the East Steens Road.

No Action Alternative

There are no known cumulative effects for the No Action Alternative.

CHAPTER V: CONSULTATION AND COORDINATION

Harney County Road Department
Oregon Department of Fish and Wildlife

CHAPTER VI: LIST OF PREPARERS

A. Participating BLM Staff

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CHAPTER VII: APPENDICES

Appendix A – Harney County Mining Plan
Appendix B – General Location Map
Appendix C – Proposed Excavation Area
Appendix D - Native-Nonnative Plant Worksheet

APPENDIX D

NATIVE/NONNATIVE PLANT WORKSHEET

Proposed Native Plants in Seed Mixture

1. Are the native plants proposed for seeding adapted to the ecological sties in the excavation area?

☒ Yes ☐ No Rationale:

Species were selected based on plants present on the site previous to excavation or identified as potentially present by the Ecological Site Inventory.

2. Is seed or seedlings of native plants available in sufficient quantity for the proposed project?

☒ Yes ☐ No Rationale:

The majority of the species selected are available in sufficient quantity in most years.

3. Is the cost and/or quality of the native seed reasonable given the project size and approved field unit management and ESR Plan objectives?

☒ Yes ☐ No Rationale:

Costs and quality of these native species has improved greatly in the past years to the point that native species prices compare favorably with nonnative species.

4. Will the native plants establish and survive given the environmental condition and the current or future competition from other species in the seed mix or from exotic plants?

☒ Yes ☐ No Rationale:

These native species will establish and survive in these environmental conditions given favorable germination conditions. However, establishment is slow and may take 3 to 5 years. Other species are competitive with weeds once established.

5. Will the current proposed land management (e.g., wildlife populations, recreation use, livestock, etc.) after the seeding establishment period maintain the seeded native plants in the seed mixture?

☒ Yes ☐ No Rationale:

Use of native species for rehabilitation projects is required if all the answers to this portion of the worksheet are yes (assuming that the native plant species are available).

Proposed Nonnative Plants in Seed Mixture

1. Is the use of nonnative plants necessary to meet objective, e.g., consistent with applicable approved field unit management plans?

☒ Yes ☐ No Rationale:

The nonnative species is proposed for fast establishment to stabilize the reclamation area and prevent weed invasion while the native species are becoming establishment.

2. Will nonnative plants meet the objective(s) for which they are planted without unacceptably diminishing diversity and disrupting ecological processes (nutrient cycling, water infiltration, energy flow, etc.) in the plant community?

☒ Yes ☐ No Rationale:

The nonnative species is being planted at a very low level so that it will accomplish the fast establishment and stabilization objectives but will become a component of the ecosystem rather than a dominant.

3. Will nonnative plants stay on the site they are seeded and not significantly displace or interbreed with native plants?

☒ Yes ☐ No Rationale:

In this area, the nonnative species stay on site and do not increase in density or abundance. They may persist, but do not interbreed with native plants.

A “No” response requires additional analysis in the Environmental Assessment of selection of an alternate species in the seed mixture.

PROPOSED SEED MIXTURE

Nonnative Plants

1. Crested wheatgrass

Native Plants

1. Sandberg's bluegrass
2. Wyoming big sagebrush